



**General Certificate of Education**

**Health and Social Care  
8621/8623**

**HC05**

**Mark Scheme**

*2007 examination - June series*

## HC05

### Question 1

- (a)(i) Ref to: greater risk to Ali of tooth decay (1) diabetes (Type II) Not Type I (1)  
weight gain/obesity (1)  
Carbohydrate conversion to fat build up (1)hypertension AW (1) heart attack (1) later (1)  
max 3 **3 marks**
- (a)(ii) Ref to: Ali's growth may be restricted (1) body repair damaged (1) body  
tissue not maintained effectively (1) hormone production reduced (1)  
antibody production impaired/low immunity (1) enzyme production reduced (1)  
max 3 **3 marks**
- (b) Any 3 of: meats/milk/cheese/eggs/fish/nuts/pulses/Quorn/soya max 3 **3 marks**
- (c)(i) Ref to: both contain carbon (1) hydrogen (1) oxygen (1) twice  
as much hydrogen as oxygen (1) disaccharides made up of two  
monosaccharide/glucose units (1) C/H/O = 1 Not with N/S/P or other symbols  
Not double/single/complex/simple max 4 **4 marks**
- (ii) 1) – any 1 of glucose/fructose/galactose **1 mark**  
2) – any 1 of sucrose/lactose/maltose **1 mark**

### Question 2

- (a)(i) Ref to: enough/sufficient energy AW (1) Allow slightly more  
not enough/insufficient iron (1) Not slightly less  
insufficient Vit A (1) Not slightly less  
Allow manipulation of figures against DRVs e.g. % / fraction  
Not raw numbers **3 marks**
- (a)(ii) Ref to energy: will have enough energy to keep her active/able cope  
stay same weight AW (1)  
not feel tired/lethargic due to energy lack (1) max 2 reduce risk of illness or example (1)  
Ref to iron: may develop anaemia (1) not enough haemoglobin/red blood  
cells (1) will make her pale (1) weak/tired (1) respiration affected/O<sup>2</sup> transport (1) max 2  
Ref to Vit A: may develop poor **night** vision (1) affect bone/teeth (1)  
damages cell structure (1) reduces resistance to infection (1) max 2 **6 marks**
- (b) Ref to: (increase iron content) eat/eat more (red) meat liver/kidney/  
plain chocolate max 2 allow pulses or e.g's/ green leafy veg/nuts/seeds/fortified  
breakfast cereals  
(increase Vit A content) eat/eat more wholemeal/liver/fish liver oils/egg yolks/  
milk/dairy products/fortified margarine max 2 **4 marks**
- (c) Any 2: state of health/level of physical activity/pregnancy/food allergies/  
body mass Accept religious beliefs – cultural/vegan/vegetarian max 2 **2 marks**

### Question 3

- (a)(i) Any one of: preventing fat rancidity AW/prevent Vit A/C destruction/  
prevent food browning (by preventing oxidising) **1 mark**
- (ii) Additive 1 mark with correct effect 1 mark  
e.g. Preservative (1) maintaining product/nutritional quality/freshness (1)  
Allow example of preservative e.g. acid/salt reducing microbial activity  
Emulsifier (1) aiding processing/preparation – or example e.g. mayonnaise  
explained  
Allow anticaking agents (1) prevents dry products sticking (1) tenderises (1) improves  
texture (1) vitamins/minerals (1) add nutritional value (1) Not e numbers  
ensuring fat droplet distribution (1) stabilisers (1) maintain emulsions (1)  
Flavour enhancers (1) improving taste AW – not flavour (1)  
Colours (1) improving the appeal of food product AW (1)  
Bleaching agents (1) 'whiten' food/improve appeal (1) 3 x 3  
Texture enhancer (1) ref viscosity/spreading (1) **6 marks**
- (b)(i) Ref to: affects food preparation and eating for Maurice – allowed to eat  
Kosher foods (1) not non-kosher/trefah foods (1) e.g. allowed meat from  
cloven footed animals – cows/sheep (1) not allowed pig meat (1) animals  
must be humanely slaughtered/drained of blood (1) can eat sea creatures  
with fins/scales (1) not shellfish (1) non-predatory fowl allowed (1) e.g.  
chicken/duck/turkey (1) cooking/eating dairy products with meat not  
allowed (1) **max 4 4 marks**
- ii) Ref to: may have gluten reaction (1) has to eat gluten free diet (1) gluten  
is a protein (1) found in wheat or e.g.'s /rye/cereals (1) can damage small intestine  
lining (1) causes malabsorption other nutrients (1) **max 4 4 marks**

### Question 4

- (a)(i) Ref to: use of dirty cutlery/crockery least common AW (1) storing food  
at an incorrect temperature 3x more common (1) using foods/food  
products when 'out of date' 2x more common than incorrect food  
storage/6x more common use of dirty cutlery/crockery (1)  
Using unclean work surfaces most common AW (1) 2x/4x/13x approx  
others (as appropriate) (1) Allow valid c.f's (1 mark each)  
Allow up to 2 marks for valid reasons for differences **4 marks**
- (a)(ii) Ref to: allow marks for reasonable suggestions for the pattern e.g. people  
spot and reject dirty cutlery/crockery – don't use it (1) don't see unclean  
work surfaces/cracks may harbour microbes (1) temperature control may be  
difficult to maintain constantly (1) economic issues may affect 'out of date'  
figures/people may not consider a few days out of date a risk – thus higher  
figures (1) **max 2 2 marks**
- (b) Any 2 of: young AW/old/pregnant women/ill people – people recovering from  
illness/breastfeeding women **max 2 2 marks**
- (c)(i) Ref to: hair may drop into/touch food (1) transfer microbes AW (1) **2 marks**

(c)(ii) Ref to: so cooking is thorough/at correct temperature/ Not: still raw (1) for sufficient time (1) to kill microbes (1) **3 marks**

(c)(ii) Ref to: microbes AW can be 'trapped' beneath ring (1) washing removes these (1) prevents transfer to food/food preparation equipment/surfaces (1)  
max 2 **2 marks**

**Paper Total 60 marks**